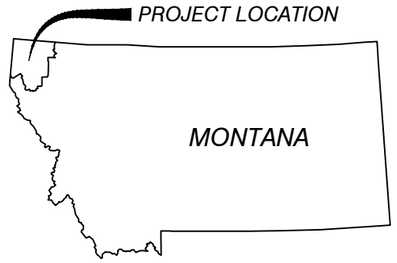
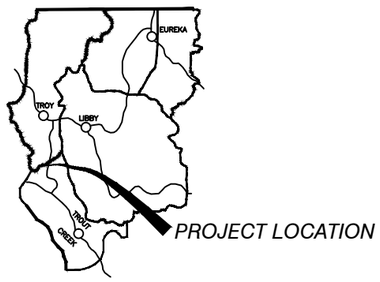


STATE VICINITY MAP

NOT TO SCALE



KOOTENAI NATIONAL FOREST MAP

NOT TO SCALE

ROAD WORK SUMMARY

ROAD NO.	ROAD NAME	LENGTH	R*
1118	DRY CREEK	1.87	R
1118A	DRY CREEK ROAD A	1.55	R
14356	EAGLE VIEW	0.84	R
14611	DRY BENCH	0.23	R

R = RECONSTRUCTION

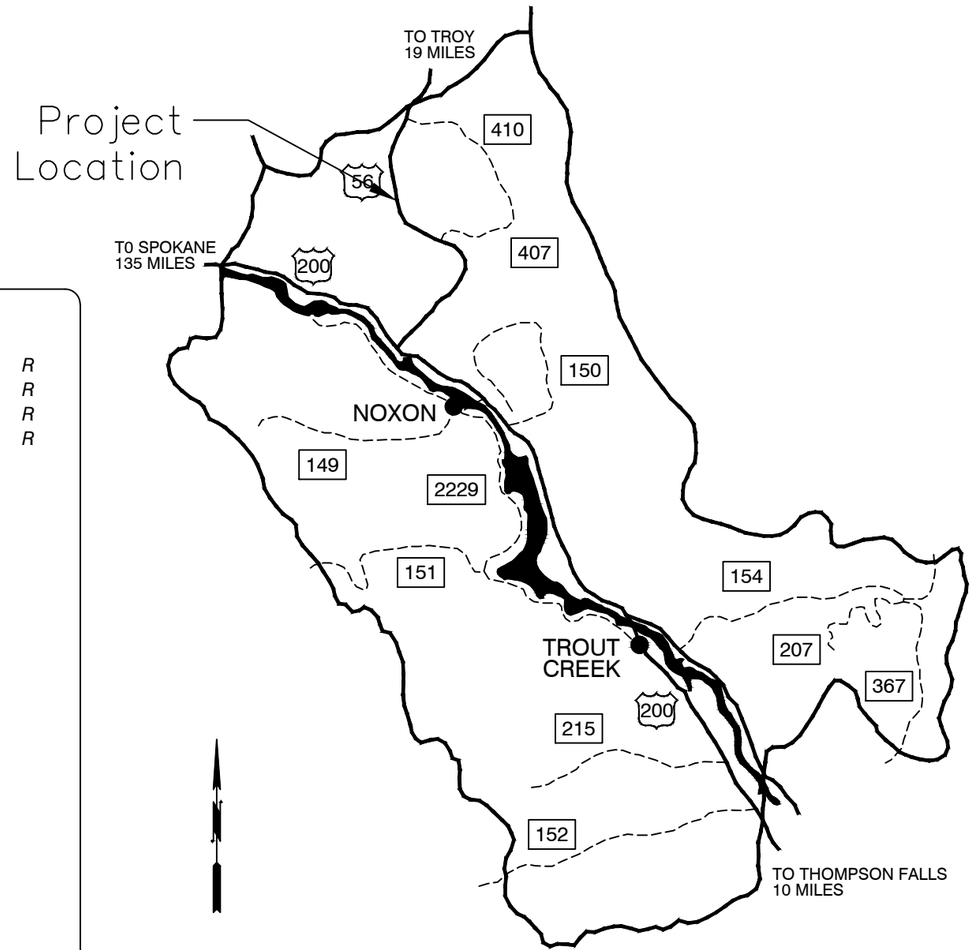
UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

REGION 1 - KOOTENAI NATIONAL FOREST

CABINET RANGER DISTRICT

PLANS FOR PROPOSED
NATIONAL FOREST SYSTEM ROADS
DRY CREEK PROJECT



CABINET RANGER DISTRICT DIAGRAM

NOT TO SCALE

PREPARED BY:

PROJECT ENGINEER _____ DATE _____

REVIEWED BY:

SUPERVISORY CIVIL ENGINEER _____ DATE _____

MULTIPLE RESOURCE REVIEW BY:

DISTRICT RANGER _____ DATE _____

I CERTIFY THAT THIS PROJECT HAS BEEN DESIGNED IN ACCORDANCE WITH SOUND ENGINEERING PRACTICE.

FOREST ENGINEER _____ DATE _____

SHEET INDEX

REVISION

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
KOOTENAI NATIONAL FOREST
FILE No.

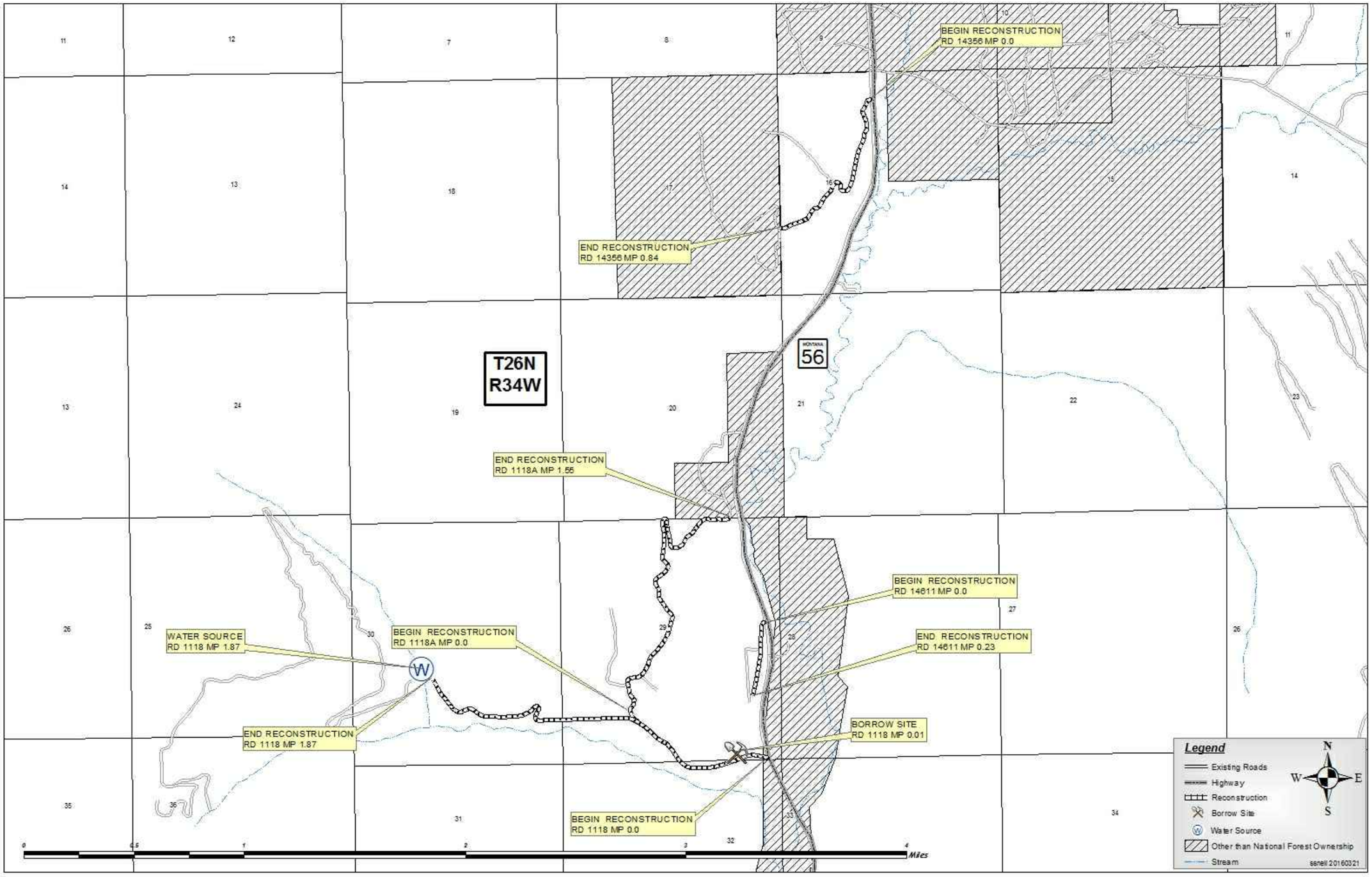
KOOTENAI NATIONAL FOREST

DRY CREEK TIMBER SALE

J.ERWIN 4/2016
DRAWN BY NJM 5/2015
CHECKED BY H.PERRINE 5/2016

SHEET TITLE
TITLE SHEET

SHEET NO.
1 OF 15



U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
KOOTENAI NATIONAL FOREST
FILE No.

REVISION

KOOTENAI NATIONAL FOREST

DRY CREEK PROJECT

DESIGNED BY J.ERWIN 4/2016
DRAWN BY S.SNELL 4/2016
CHECKED BY H.PERRINE 5/2016

SHEET TITLE
VICINITY MAP

SHEET NO.
2 OF15

GENERAL NOTES

1. SECTION 156 – CONTRACTOR IS REQUIRED TO PROVIDE TRAFFIC CONTROL INCLUDING CLOSURE DEVICES AND SIGNS. TRAFFIC CONTROL IS INCIDENTAL TO OTHER ITEMS IN THIS CONTRACT. A PLAN MUST BE PROVIDED TO THE CO PRIOR TO THE START OF WORK.

2. SECTION 201 – TOPS, LIMBS, AND STUMPS SHALL BE DISPOSED OF OUTSIDE OF CLEARING LIMITS. DISPOSE OF MERCHANTABLE TIMBER DESIGNATED FOR REMOVAL ACCORDING TO THE PROVISIONS OF THE TIMBERSALE CONTRACT.

3. SECTION 204 / 303 – UNSUITABLE OR OVERSIZED MATERIAL ENCOUNTERED DURING CONSTRUCTION OR RECONSTRUCTION SHALL BE PLACED ALONG THE TOE OF THE FILL, AWAY FROM DRAINAGE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ROAD RECONDITIONING, AND AGGREGATE SURFACE RECONDITIONING AND CLEANING INLET AND OUTLET OF EXISTING PIPES. REFER TO FSSS 303.

4. SECTION 230 – BRUSHING SHALL INCLUDE ALL TURNOUTS AND J–HOLE

5. SECTION 602 – CONTRACTOR SHALL SUBMIT A DEWATERING PLAN AND AN EROSION CONTROL PLAN TO THE CO IN WRITING PRIOR TO THE START OF WORK. THE COST OF BOTH DEWATERING AND EROSION CONTROL ARE INCIDENTAL TO ITEM 60250 AND 60253 IN THIS CONTRACT.

6. SECTION 602 – CULVERTS ON LIVE STREAMS SHALL BE INSTALLED DURING LOW FLOW IF POSSIBLE.

7. SECTION 602 – REMOVAL OF CSP OFF FOREST IS INCIDENTAL TO PAY ITEM 602.

8. SECTION 602 – ALL CULVERTS SHALL BE INSTALLED BETWEEN THE DATES OF MAY 1 – OCTOBER 1 UNLESS APPROVED BY THE CO.

9. SECTION 625 – ALL DISTURBED AREAS OUTSIDE OF THE ROADWAY SHALL BE SEEDED UPON FINISHING ROAD WORK ON ROADS 1118, 1118A, AND 14356.

10. SCHEDULE OF WORK SHALL BE PROVIDED BY THE CONTRACTOR IN WRITING AT THE PRE–WORK MEETING. ANY CHANGES TO THE SCHEDULE OF WORK SHALL BE PRESENTED IN WRITING TO THE CO.

11. CONTRACTOR SHALL WORK MONDAY THROUGH FRIDAY. NO WORK SHALL BE CONDUCTED WEEKENDS OR FEDERAL HOLIDAYS. PRIOR APPROVAL MUST BE RECEIVED FROM THE CO PRIOR TO WORKING OUTSIDE THESE RESTRAINTS.

12. ALL RIPRAP AND PIT RUN MATERIAL WHICH IS GOVERNMENT FURNISHED MAY BE BORROWED ON SITE. THE PRIMARY LOCATION FOR THESE MATERIALS WILL BE AT GRAVEL PIT ON ROAD 1118 MP 0.10.

13. ALL ROADS SHALL BE SCARIFIED TO THE BOTTOM OF POTHOLES AND CLOSED DEPRESSIONS WHEN THEY ARE PRESENT ON THE ROAD SURFACE DURING ROADWAY RECONDITIONING.

14. ALL ROADS MAY HAVE BURIED POWER CABLE, CALL BEFORE YOU DIG FOR LOCATION.

FOREST SERVICE
U.S. DEPARTMENT OF AGRICULTURE

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KOOTENAI NATIONAL FOREST
FILE No.

KOOTENAI NATIONAL FOREST

DRY CREEK PROJECT

DESIGNED BY J.ERWIN 4/2016
DRAWN BY NJM 5/2015
CHECKED BY H.PERRINE 5/2016

SHEET TITLE
GENERAL NOTES

SHEET NO.
3 OF 15

ESTIMATE OF QUANTITIES

				ROAD NUMBER	1118	1118A	14356	14611	-	-	
				MILE POST (MILES)	1.87	1.55	0.84	0.23	-	-	
ITEM NO.	DESCRIPTION	METHOD OF MEASURE	UNIT	REVISION DATE	QUANTITIES						REMARKS
15101	Mobilization	LSQ	LS	FP-03	1	1	1	1			
20151	Clearing and Grubbing Roadside, Slash Treatment K	AQ	Mile	FP-03		1.55	0.84	0.23			
20401	Roadway Excavation, Compaction Method E, Widen Switchback	AQ	EA	FP-03	1						
20453	Roadway Excavation, Compaction Method D, Remove Stump	LSQ	LS	FP-03			1				
20401	Roadway Excavation, Compaction Method E, Turnaround	AQ	EA	FP-03			1				
20419	Drainage Excavation, Type Ditch Reestablish	AQ	LF	FP-03	200						
20419	Drainage Excavation, Type Surface Water Deflector, Comp F	AQ	LF	FP-03	80						
20420	Drainage Excavation, Earth Berm	AQ	EA	FP-03		1					
20420	Drainage Excavation,Remove Earth Berm	AQ	EA	FP-03		1					
20420	Drainage Excavation, Type Drainage Dip, Comp Method E	AQ	EA	FP-03	4	2					
20420	Drainage Excavation, Type Reconstruct Dip, Comp Method E	AQ	EA	FP-03	4		2				
20420	Drainage Excavation, Reinforced Swale, Comp Method E	AQ	EA	FP-03		1					Use local Rock on site or at Pit location
20420	Drainage Excavation, Type Outlet Ditches	AQ	EA	FP-03	4						
20453	Roadway Excavation, Turnout	LSQ	LS	FP-03			1				
20453	Roadway Excavation, Fill Hole	LSQ	LS	FP-03		1					
20477	Drainage Excavation, French Drain	LSQ	LS	FP-03	1						
20478	Unsuitable Excavation, Widen Turnaround	LSQ	LS	FP-03	1						
23050	Roadside Brushing	AQ	Mile	FP-03	1.87						
30357	Roadway Reconditioning, Compaction Method A	AQ	Mile	FP-03			0.84				
30357	Roadway Reconditioning, Compaction Method B	AQ	Mile	FP-03	1.87	1.55		0.23			
32213	Place Surface Course, 2" Minus, Compaction Method B	CQ	CY	FP-03	1,420						Quantities are approximate and in place compacted
32222	Place Pit Run Maximum Size 4" , Compaction Method B, GFP	CQ	CY	FP-03	2,000	190		300			Quantities are approximate and in place compacted
60250	18" CSP, 0.064" Thick, Includes Excavation, Compaction B	AQ	LF	FP-03	185	46					
60253	66"x51" CSPA, 0.064" Thick, Includes Excavation, Compaction Method B	AQ	LF	FP-03	44						
62501	Seeding, Dry Method	CQ	Acre	FP-03	0.53	0.14	0.13	0.11			

FOREST SERVICE
US DEPARTMENT OF AGRICULTURE

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U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
KOOTENAI NATIONAL FOREST
FILE No.

KOOTENAI NATIONAL FOREST
DRY CREEK PROJECT

DESIGNED BY J.ERWIN 4/2016
DRAWN BY NJM 5/2015
CHECKED BY H.PERRINE 5/2016

SHEET TITLE
SUMMARY OF QUANTITIES

SHEET NO.
4 OF 14

DRAINAGE LISTING

AS DESIGNED						AS BUILT						INSTALLATION				RIPRAP			BMP ITEMS					REMARKS
STATION OR MILE POST	CULVERT DIAMETER (INCHES)	CULVERT LENGTH (FEET)	ROLLING DRAIN DIP	French DRAIN (LIN. FT.)	SURFACE DEFLECTOR (LIN. FT.)	STATION OR MILE POST	CULVERT DIAMETER (INCHES)	CULVERT LENGTH (FEET)	ROLLING DRAIN DIP	BLIND DRAIN (LIN. FT.)	SURFACE DEFLECTOR (LIN. FT.)	TYPE*	SKEW (DEGREES)	OUTLET DITCH	DITCH	CLASS	INLET (CY)	OUTLET (CY)	STRAW BALES	SLASH FILTER DRAIN	FILTER FABRIC INLET	FILTER FABRIC OUTLET	SILT FENCE (LIN. FT.)	Corrugations Shall Be 2-2/3" x 1/2" Unless Otherwise Stated Below Pipe Thickness Shall Be As Shown on The 'Summary of Quantities' Sheet *See 'CULVERT CONSTRUCTION DETAILS' Sheet ** As Staked
NFSR 1118																								
0.10			X																					
0.20			X																					Armor inlet and outlet with local Riprap, incidental to
0.36	66x51	44										II				II	0.5	0.5						CSP installation for whole contract.
0.40	18	35										II		X		II	0.25	0.25						Armor inlet and outlet with local Riprap
0.44	18	35										II				II	0.25	0.25						Armor inlet and outlet with local Riprap
0.50				100										X										Construct Outlet Drain to capture flood water
0.52																								End French Drain, Length is Approx. Build as Staked
0.61	18	35										II				II	0.25	0.25						Armor inlet and outlet with local Riprap
0.72			X																					
0.79			x																					Reconstruct Existing Drain Dip to Specification
0.90														X										
0.98			x																					Reconstruct Existing Drain Dip to Specification
1.21					20																			
1.28			x																					Reconstruct Existing Drain Dip to Specification
1.34					20																			
1.40			x																					Reconstruct Existing Drain Dip to Specification
1.50			X																					
1.59														X										
1.62	18	45										II					0.25	0.25						Armor inlet and outlet with local Riprap
1.69					20																			
1.70	18	35										II					0.25	0.25						Armor inlet and outlet with local Riprap
1.77					20										X									Reestablish ditch approx. 200'
NFSR 1118A																								
0.00	18	46										II					0.25	0.25						Armor inlet and outlet with local Riprap
0.20			X																					
1.00			X																					
1.04			swale									I					10							Armor Swale with Class I Riprap.
NFSR 14356																								
0.35			x																					Reconstruct Existing Drain Dip to Specification
0.76			x																					Reconstruct Existing Drain Dip to Specification
X-Designates Construct Dip																								
x- Designates Reconstruct Dip to current specifications																								

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FOREST SERVICE
KOOTENAI NATIONAL FOREST
FILE No.

KOOTENAI NATIONAL FOREST
DRY CREEK PROJECT

DESIGNED BY J.ERWIN 4/2016
DRAWN BY NJM 5/2015
CHECKED BY H.PERRINE 5/2016

SHEET TITLE
DRAINAGE LISTING

SHEET NO.
5 OF 15

Note: Mileages are measured electronically and do not match Mile Post on the ground.

Dry Creek Road 1118

Station or Mile Post	Pay Item Number	Description of Work	Station or Mile Post	Pay Item Number	Description of Work
		Beginning of Project-Junction with Hwy 56		32213	End Placing SurfaceCourse 4" minus
M.P. 0.00	23050	Begin Roadside Brushing (See Typical Sheet 12)		60250	Install 18" x 35' CSP, Armor inlet, Class ll RipRap .25CY
	30357	Begin Roadway Reconditioning, Compaction Method B, Maintain Crown Surface (See Typical, Sheet 13)	M.P. 0.69		Road Junction 1118A right
	62501	Seed all disturbed Areas	M.P. 0.72	20420	Construct Drainage Dip, Compaction E
MP. 0.10	20420	Construct Drainage Dip, drain left into leadout ditch, Compaction E, (See Detail, Sheet 11)	M.P. 0.79	20420	Reconstruct Drainage Dip, Compaction E
		Turnout right, Trailhead 1020 left	M.P. 0.90	20420	Construct Outlet Ditch
	30357	End Crown Surface. Begin Sloping Surface to drain Left. Borrow site, gravel pit on Right	M.P. 0.98	20420	Reconstruct Drainage Dip, Compaction E
M.P. 0.20	20420	Construct Drainage Dip, drain left into leadout ditch, block ditch left, Compaction E	M.P. 1.16	32213	Begin Placing Surface Course 4" Max. 12'wide x 6" deep, Commercial Source (See Typical Sheet 9)
M.P. 0.35	32222	Begin Place Pit Run material 4" max size, 2' extra cover over pipe, 22' top width, GFP (See Typical Sheet 9)	M.P. 1.21	20419	Install 20' Surface Water Deflector, Compaction F (See Detail Sheet 10)
	32213	Begin Placing Surface Course, 2'' minus, 20' top width x 4" deep as staked, Commercial Source. (See Typical Sheet 9)	M.P. 1.23	20401	Widen Switchback , use local material to widen fill area around curve, aproximately 1000CY
M.P. 0.36	60253	Remove 2-18" CSP Install 66" x 51" x 44' CSPs, Place Class ll Riprap at inlet and outlet, .5 CY at each end = 1CY.	M.P. 1.28	20420	Reconstruct Drainage Dip, Compaction E
M.P. 0.40	20420	Construct Outlet Ditch left , 50 feet up from 66" CSP	M.P. 1.34	20419	Install 20' Surface Water Deflector, Compaction F (See Detail Sheet 10)
	30357	End Slope Surface Left. Begin Crown Surface.	M.P. 1.40	20420	Reconstruct Drainage Dip, Compaction E
	60250	Install 18" x 35' CSP , Drain Left to outlet ditch, Armor inlet , Class ll RipRap .25 CY (See Typical Sheet 14)	M.P. 1.50	20420	Construct Drainage Dip, Compaction E
M.P. 0.44	60250	Remove and Install 18" x 35' CSP, drain right, Armor inlet, Class ll RipRap .25 CY .	M.P. 1.55		Waste Location
	30357	End Crown Surface. Begin Slope Surface to drain Right.	M.P. 1.59	20420	Reestablish Dip Outlet Ditch
		Begin removal Left Ditch 10' past catch basin.	M.P. 1.62	60250	Install 18"x 45' CSP, Armor inlet and outlet, Class ll RipRap .5 CY
M.P. 0.50	20420	Construct Outlet Ditch left to capture flood water.	M.P. 1.63	32213	End Placing Surface Course 4" Max.
	20477	Remove 18" CSP and Construct French Drain across road 10' wide and begin French Drain left along road edge, connecting to Road French Drain. (See Detail Sheet 15)	M.P. 1.69	20419	Install 20' Surface Water Deflector, Compaction F (See Detail Sheet 10)
	30357	End Slope Surface Right. Begin Slope Surface to drain Left into ditch over the French Drain.	M.P. 1.70	60250	Remove and Install 18"x 35' CSP, Armor inlet and outlet, Class ll RipRap .5 CY
	30357	End Removal Left Ditch. Begin removal Right Ditch	M.P. 1.77	20419	Install 20' Surface Water Deflector, Compaction F (See Detail Sheet 10)
M.P. 0.52	20477	End French Drain		20419	Begin Reestablish Ditch (approximately 200')
	32222	End Placing Pit Run, 6" Max size, 2' deep. Begin placing Pit Run, 6" Max size, 1' deep	M.P. 1.80	20419	End Reestablish Ditch
M.P. 61	30357	End Removal Right Ditch. End Slope Surface Left. Begin Crown Surface	M.P. 1.87	20478	Enlarge Turnaround as staked, waist material in low spot existing road, MP. 1.55, at staked location, approximate 1000 CY,
	32222	End placing Pit Run 1' deep.			End of Project

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U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
KOOTENAI NATIONAL FOREST
FILE No.

KOOTENAI NATIONAL FOREST
DRY CREEK PROJECT

DESIGNED BY J. ERWIN 4/2016
DRAWN BY NJM 5/2015
CHECKED BY H.PERRINE 5/2016

SHEET TITLE
ROAD LOG 1118

SHEET NO.
6 OF 15

Eagle View Road 14356			Dry Bench 14611		
Station or Mile Post	**Pay Item Number**	**Description of Work**	**Station or Mile Post**	**Pay Item Number**	**Description of Work**
M.P. 0.00		Beginning of Project-Junction with Hwy 56	M.P. 0.00		Beginning of Project-Junction with Hwy 56, MP 13.03
	20151	Begin Clearing and Grubbing 5' both sides of road, Disposal Method K (See Typical Sheet 12)		20151	Begin Clearing and Grubbing 5' both sides of road, Disposal Method K (See Typical Sheet 12)
	30357	Begin Roadway Reconditioning, Compaction Method A, (See Typical Sheet 13)		30357	Begin Roadway Reconditioning, Crown surface, Compaction Method B, (See Typical Sheet 13)
	62501	Seed all disturbed Areas		32222	Begin Placing Pit Run material, 4" max size, GFP, 12'wide x 6"deep. Compaction Method B
M.P. 0.20		Turnout right, Borrow Site		62501	Seed all disturbed Areas
M.P. 0.25		Turnout left	M.P. 0.30		Overhead Power line crossing from HWY 56
M.P. 0.35	20420	Reconstruct Drainiage Dip, (See Detail sheet 11)	M.P. 0.23	32222	End Placing Pit Run material
M.P. 0.44	20453	Switchback, remove slump and large stump.			End of Project
M.P. 0.50		Otter Lane, right Private road			
M.P. 0.70	20453	Construct Turnout left, old Clearcut			
M.P. 0.76	20420	Reconstruct Drainiage Dip			
M.P. 0.84	20401	Construct Turn Around left before road "Y" junction, approximately 500CY. CAUTION Powerline burried.			
		End of Project			

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U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
KOOTENAI NATIONAL FOREST
FILE No.

KOOTENAI NATIONAL FOREST

DRY CREEK PROJECT

J.ERWIN 4/2016
DRAWN BY NJM 5/2015
CHECKED BY H.PERRINE 5/2016

SHEET TITLE
ROAD LOG
RD. 14356 & 14611

SHEET NO.
8 OF 15

Note: Mileages are measured electronically and do not match Mile Post on the ground.

Dry Creek Road A 1118A

Station or Mile Post	Pay Item Number	Description of Work	Station or Mile Post	Pay Item Number	Description of Work
M.P. 0.00		Beginning of Project-Junction with Road 1118, MP 0.69	M.P. 0.28		Road Junction into old unit right
	30357	Begin Roadway Reconditioning, Compaction Method B, (See Typical Sheet 13)		32222	End Placing Pit Run material 4" Max size, 6 inches deep
	20151	Begin Clearing and Grubbing 5' both sides of road, Disposal Methd K (See Detail Sheet 12)	M.P. 0.49		Road Junction into old unit right
	62501	Seed all disturbed Areas	M.P. 0.78		2 Road Junctions on left
	60250	Remove existing and Install 18" X 46' CSP	M.P. 0.93		Road Junction into old unit right
M.P. 0.01		Route Marker	M.P. 1.00	20420	Construct Drainage Dip, Compaction E
M.P. 0.04		Turnout right	M.P. 1.03	20482	Remove Earth Berm
M.P. 0.05		BURIED CABLE AT THIS LOCATION ,NOT LOCATED	M.P. 1.04	20420	Construct Reinforce Swale, Armor with 10 CY of Riprap, drain right (See Detail Sheet 9)
M.P. 0.08	32222	Begin Placing Pit Run material 4" Max size, 6 inches deep (See Detail sheet 9)	M.P. 1.05	20453	Fill hole on outside road edge at swithback, use local material
M.P. 0.10	30357	Outslope road to drain Right to outlet ditch right	M.P. 1.07	20420	Construct Earth Berm
	32222	End PlacingPit Run material 4" Max size, 6 inches deep	M.P. 1.10	30357	Maintain swale, drain left
M.P. 0.17	32222	Begin Placing Pit Run material 4" Max size, 6 inches deep	M.P. 1.3	30357	Maintain swale, drain left
M.P. 0.20	20420	Construct Drainage Dip, drain right, Compaction E	M.P. 1.4	20420	Road Junction into private property on left. Construct Double Earth Berm to block access to private property
			M.P. 1.55		End of Project

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FOREST SERVICE
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KOOTENAI NATIONAL FOREST
DRY CREEK PROJECT

DESIGNED BY J.ERWIN 4/2016
DRAWN BY NJM 5/2015
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SHEET TITLE
ROAD LOG
RD. 1118A

SHEET NO.
7 OF 15

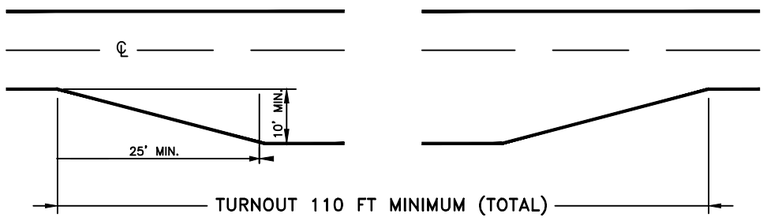
CONSTRUCTION DETAILS

ROAD 1118
4" MAX
MP0.35–MP0.52 2' DEEP
MP0.52–MP0.61 1' DEEP.
2" MINUS
MP 0.35–MP0.61 4" DEEP
MP1.16 – 1.63 6" DEEP

ROAD 14611
4" MAX
MP0.00– MP0.23 6"DEEP

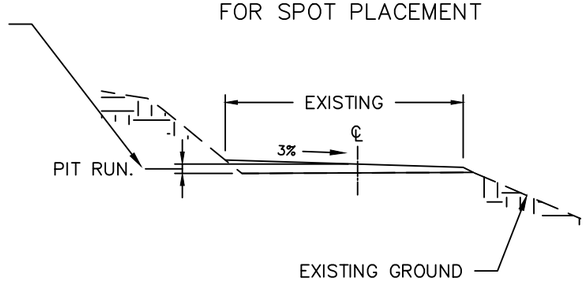
ROAD 1118A
4" MAX
MP0.08– MP0.10,
MP0.17–MP0.28, 6" DEEP

TURNOUT CONSTRUCTION DETAIL (LEFT OR RIGHT)



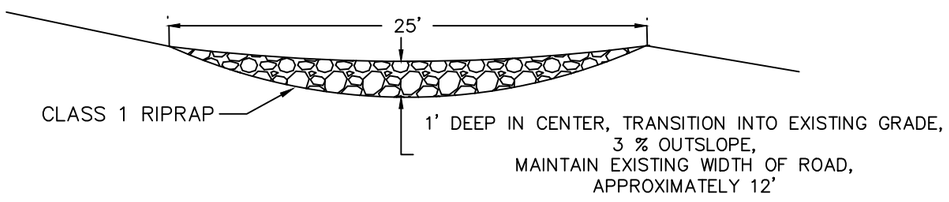
NOTES:
1. DESIGNS ARE BASED ON COMMON MATERIALS. IF OTHER MATERIALS ARE ENCOUNTERED NOTIFY CO.

PIT RUN PLACEMENT DETAIL FOR SPOT PLACEMENT

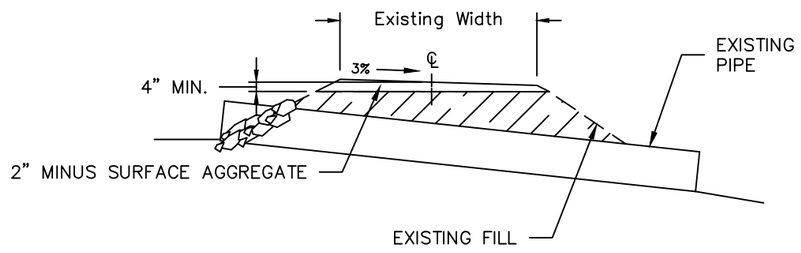


NOTES:
1. 4" MINUS PIT RUN WILL IS AVAILABLE AT OVERMANS PIT ON HWY 200, 1 MILE INTO IDAHO FROM THE MONTANA BORDER.
2. THE PIT RUN SHALL BE LAYED DOWN IN A LIFT WITH A COMPACTED THICKNESS OF 6".
3. EACH LIFT SHALL BE COMPACTED USING A STEEL–WHEELED, VIBRATORY ROLLER COMPACTOR.
4. THE LENGTH OF PLACEMENT IS AS STAKED BY THE ENGINEERING REPRESENTATIVE
5. 6" PIT RUN IS AVAILABLE TO BE SCREENED AT LOCAL PIT, SEE MAP.

REINFORCED SWALE CONSTRUCTION DETAIL



AGGREGATE PLACEMENT DETAIL FOR COVER OVER CULVERTS



NOTES:
1. 2" MINUS SURFACE AGGREGATE WILL IS AVAILABLE AT OVERMANS PIT ON HWY 200, 1 MILE INTO IDAHO FROM THE MONTANA BORDER.
2. THE AGGREGATE SHALL BE LAYED DOWN IN A LIFT WITH A COMPACTED THICKNESS OF 6".
3. EACH LIFT SHALL BE COMPACTED USING A STEEL–WHEELED, VIBRATORY ROLLER COMPACTOR.
4. THE LENGTH OF PLACEMENT IS AS STAKED BY THE ENGINEERING REPRESENTATIVE.
5. SHAPE SURFACE AS SPECIFIED IN THE ROAD LOGS, IF NOT SPECIFIED AS EXISTING.

DRAWINGS NOT TO SCALE

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REVISION

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
KOOTENAI NATIONAL FOREST
FILE No.

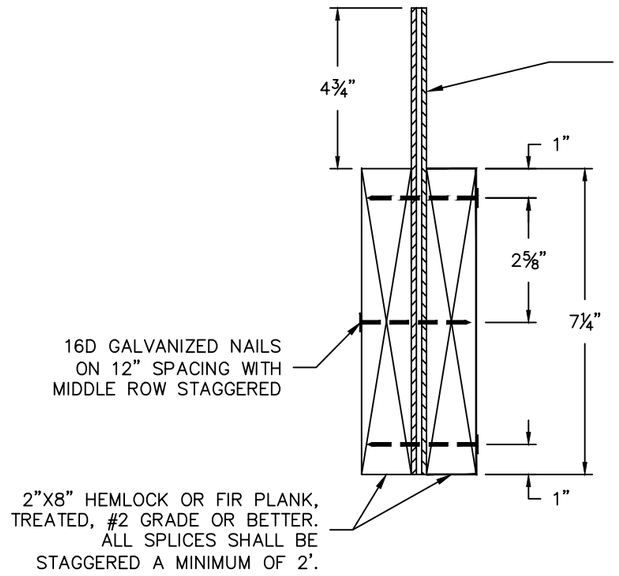
KOOTENAI NATIONAL FOREST
DRY CREEK PROJECT

DESIGNED BY J.ERWIN 4/2016
DRAWN BY NJM 5/2015
CHECKED BY H.PERRINE 5/2016

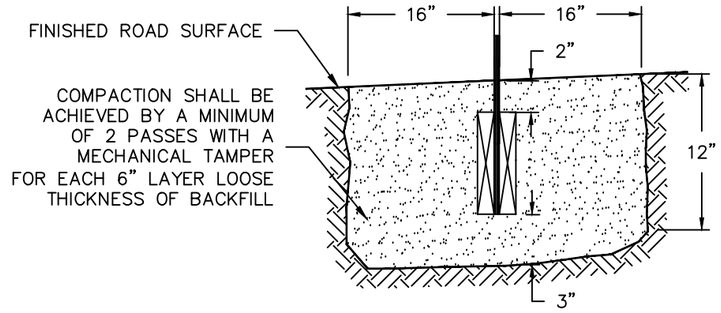
SHEET TITLE
CONSTRUCTION DETAILS

SHEET NO.
9 OF 15

SURFACE WATER DEFLECTOR DETAILS



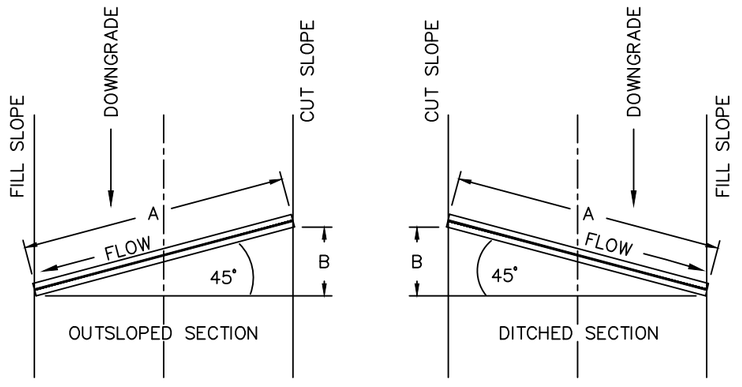
12" GOODYEAR PLYLON PLUS 375 WITH A MINIMUM THICKNESS OF 7/16". OTHER COMMERCIAL BRANDS MAY BE USED BUT THE BELT THICKNESS SHALL BE EQUAL TO OR GREATER THAN 7/16" AND SHALL HAVE A MINIMUM BREAKING STRENGTH OF 4200 psi. THE PLIES SHALL BE MADE OF NYLON FOR BELT STIFFNESS. MATERIAL SHALL BE ONE CONTINUOUS LENGTH.



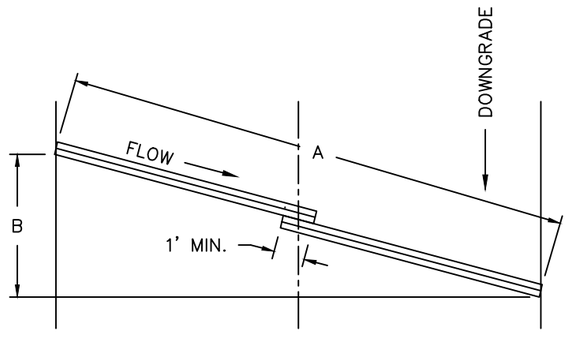
INSTALLATION DETAIL

NOTES

1. ALL TREATED LUMBER SHALL BE INCISED AND PRESSURE TREATED IN ACCORDANCE WITH THE AWPA UC4–A FOR GROUND CONTACT.
2. FIELD TREATMENT: ALL ABRASIONS AND CUTS MADE IN THE FIELD SHALL BE CAREFULLY TRIMMED AND GIVEN THREE BRUSH COATS OF THE TREATMENT SOLUTION. HOLES DRILLED IN THE FIELD SHALL BE POURED FULL OF PRESERVATIVE AND PLUGGED WITH TIGHT FITTING TREATED PLUGS.
3. ALL HARDWARE SHALL CONFORM TO FP–03 716.02 AND SHALL BE GALVANIZED. LUMBER SHALL CONFORM TO FP–03 716.03.
4. OUTLET OF DEFLECTOR SHALL BE A MINIMUM OF 0.5' LOWER THAN THE INLET.
5. CERTIFICATIONS: ONE COPY OF THE FOLLOWING COMPLIANCE CERTIFICATE SHALL BE FURNISHED UPON DELIVERY OF THE MATERIALS:
   A. SUPPLIER CERTIFICATION THAT ALL WOOD MATERIALS MEET THE REQUIREMENTS AS TO SPECIES AND GRADE.
   B. CERTIFICATION OF TREATMENT OF LUMBER TO INCLUDE TYPE OF PRESERVATIVE, RETENTION IN PCF (ASSAY METHOD) AND PENETRATION IN INCHES, BY A QUALIFIED INSPECTION AND TESTING AGENCY.
   C. SUPPLIER CERTIFICATION THAT ALL RUBBER BELTING MATERIALS MEET THE REQUIREMENTS AS NOTED IN DETAIL.
6. SKEW SHALL BE 45 DEGREES UNLESS OTHERWISE INDICATED. LENGTH AS INDICATED IN DRAINAGE LISTING.



SINGLE LANE



DOUBLE LANE

DRAWINGS NOT TO SCALE

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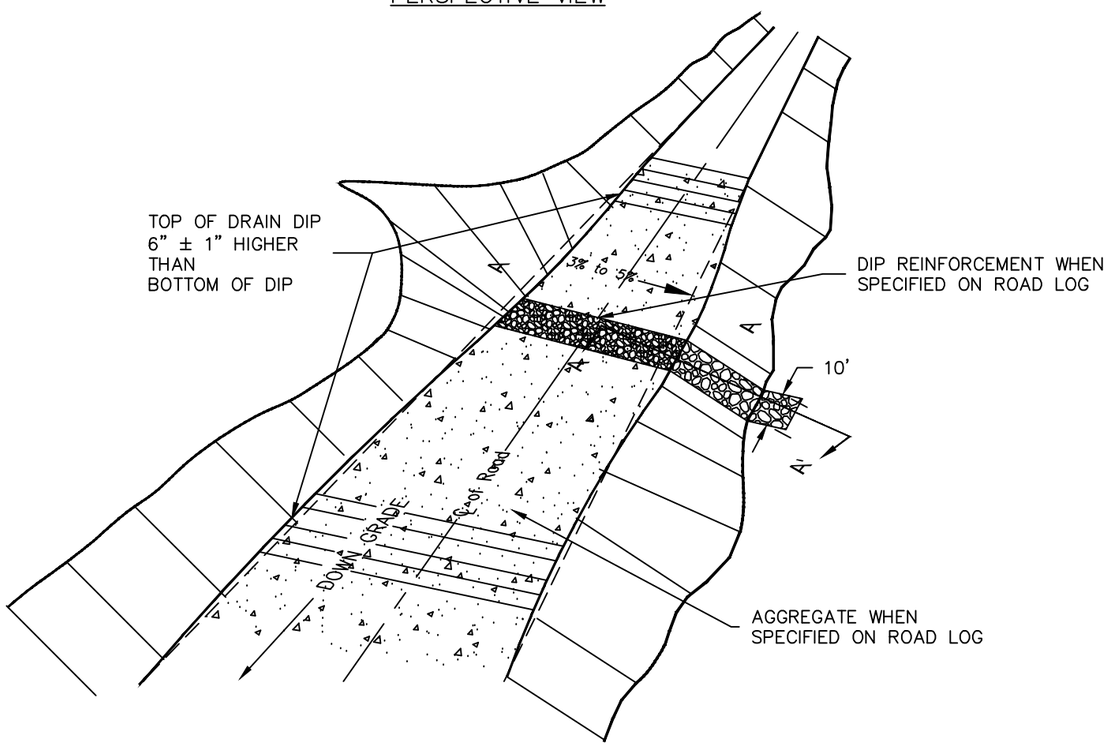
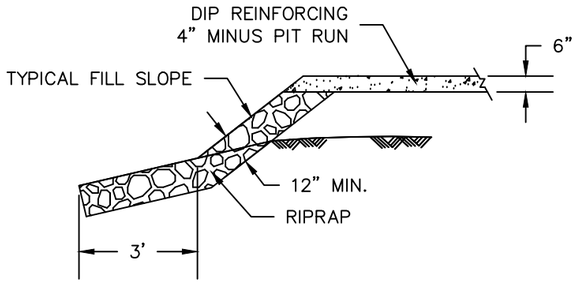
SHEET TITLE
SWD DETAILS

SHEET NO.
10 OF 15

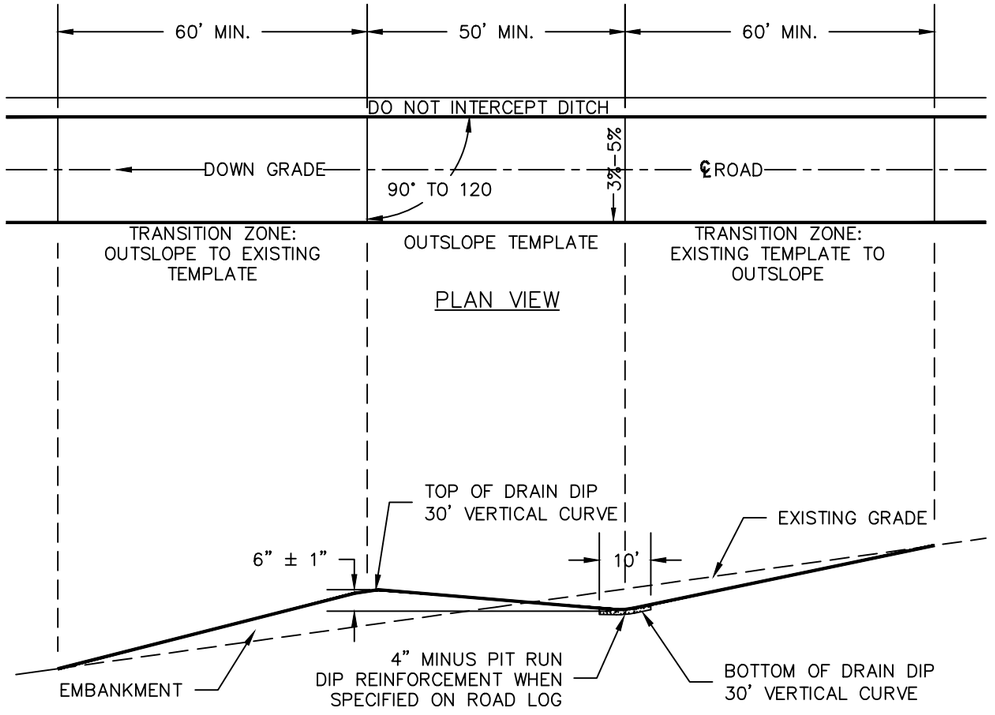
DRAIN DIP DETAILS

PERSPECTIVE VIEW





SECTION A' – A
RIPRAP SECTION DETAIL
WHEN SPECIFIED ON ROAD LOG



PLAN VIEW

PROFILE VIEW

NOTES:

1. EXCAVATION BELOW THE EXISTING GRADE LINE WILL BE USED AS EMBANKMENT ON THE DOWN GRADE SIDE OF THE DIP. COMPACTION METHOD E.
2. ALL DISTURBANCES SHALL BE KEPT WITHIN THE LIMITS OF THE DRAIN DIP.
3. AGGREGATE, DIP REINFORCEMENT, OR RIPRAP WILL ONLY BE REQUIRED WHEN SPECIFIED IN THE DRAINAGE LISTING OR RECONSTRUCTION LOG.

DRAWINGS NOT TO SCALE

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SHEET TITLE
DRAIN DIP DETAILS

SHEET NO.
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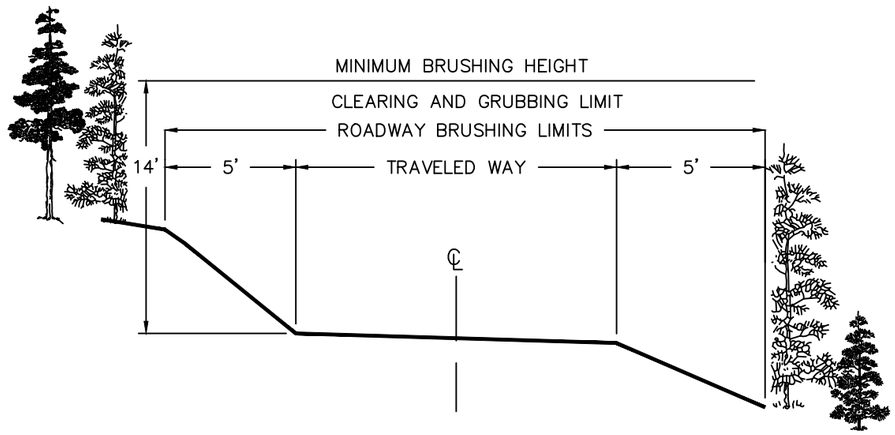
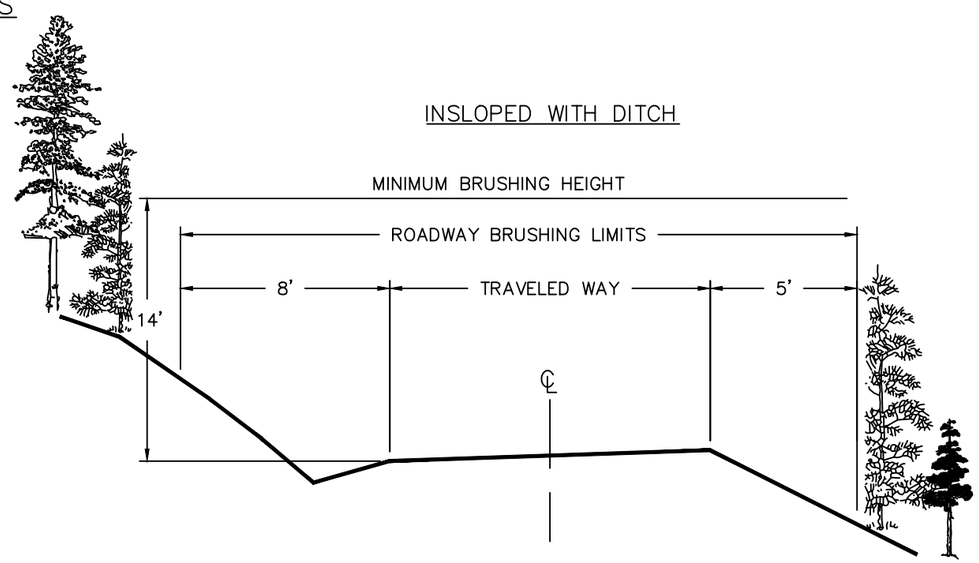
CLEARING AND BRUSHING LIMITS
CROSS SECTIONS

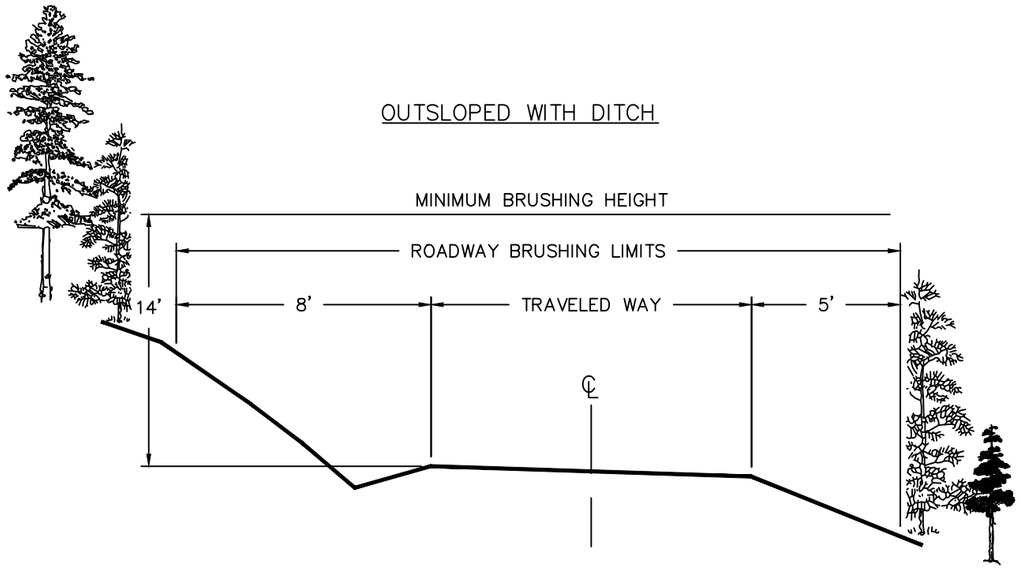
OUTSLOPED WITHOUT DITCH



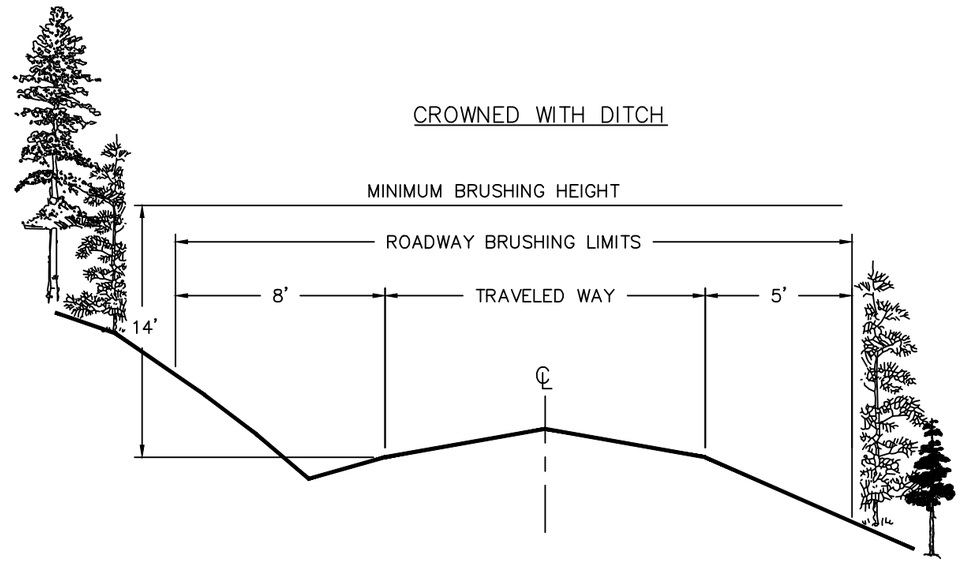
INSLOPED WITH DITCH



OUTSLOPED WITH DITCH



CROWNED WITH DITCH



DRAWINGS NOT TO SCALE

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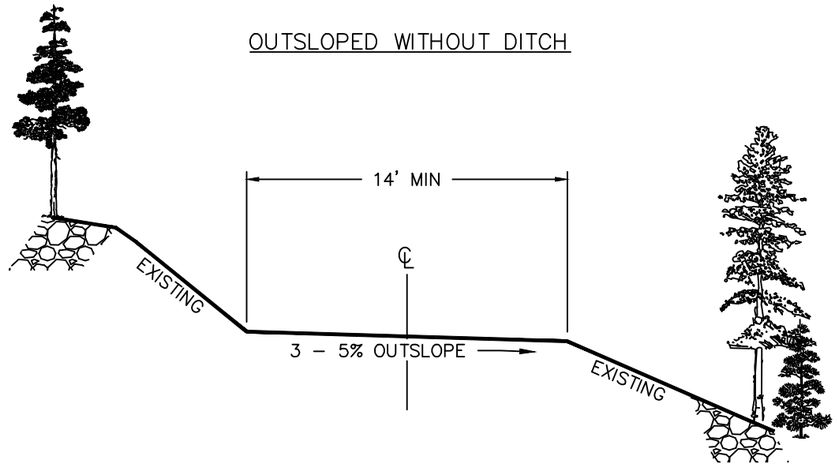
SHEET TITLE
CLEARING AND BRUSHING *DETAILS*

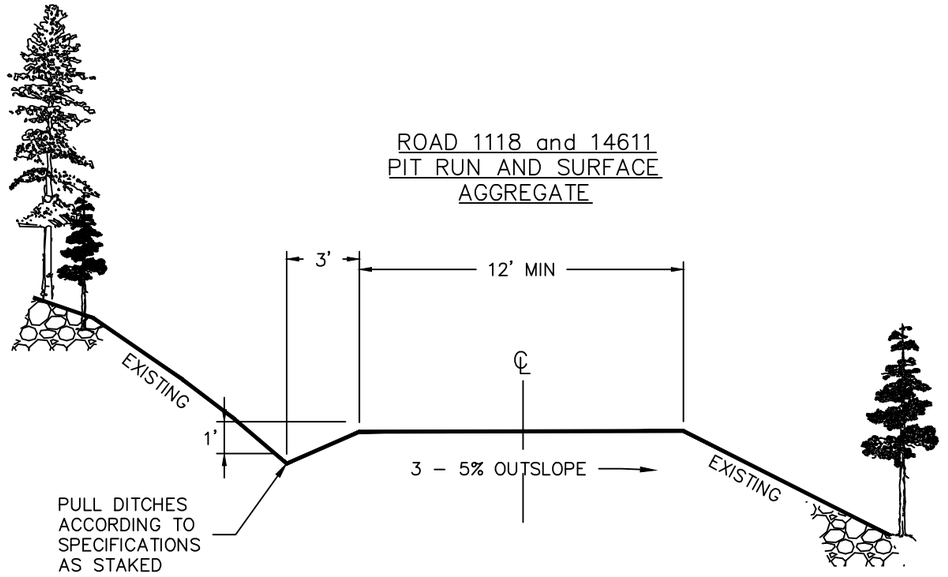
SHEET NO.
12 OF 15

RECONDITIONING LIMITS
CROSS SECTIONS

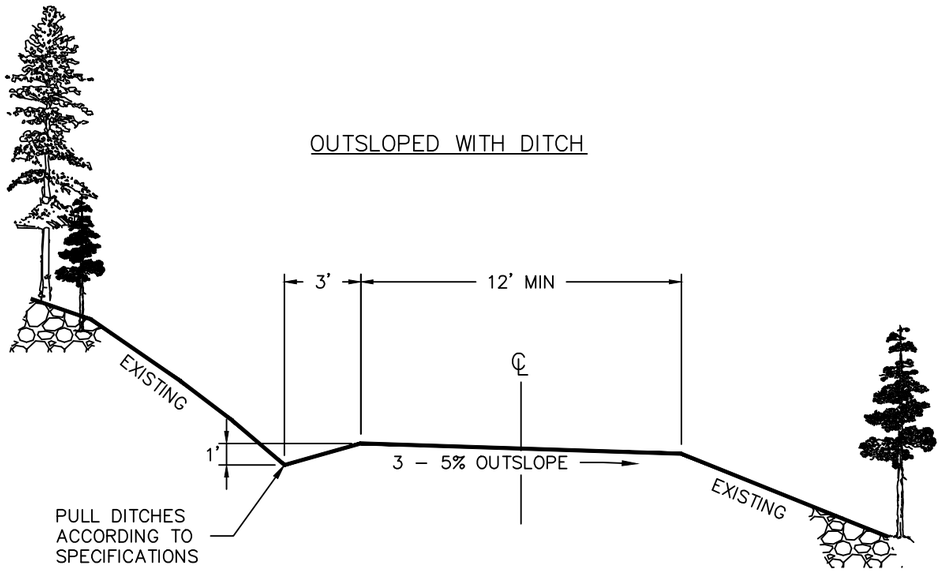
OUTSLOPED WITHOUT DITCH



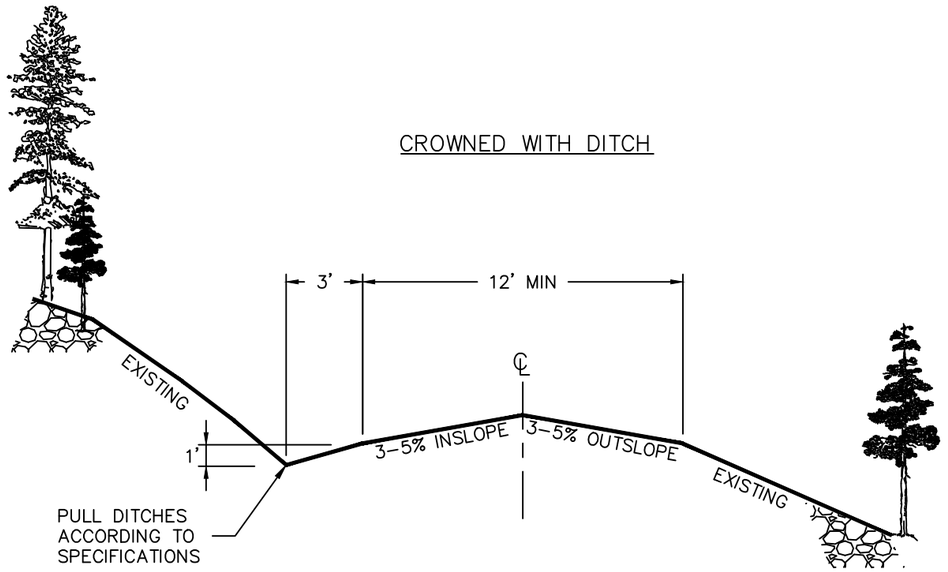
ROAD 1118 and 14611
PIT RUN AND SURFACE
AGGREGATE



OUTSLOPED WITH DITCH



CROWNED WITH DITCH



DRAWINGS NOT TO SCALE

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U.S. DEPARTMENT OF AGRICULTURE

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SHEET TITLE
RECONDITIONING DETAILS

SHEET NO.
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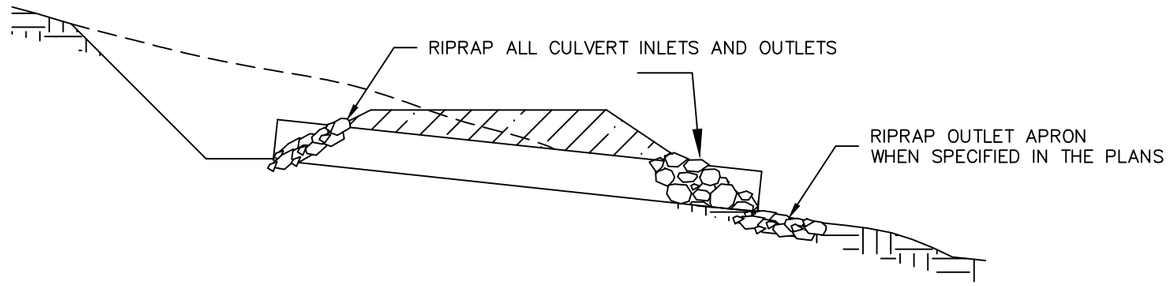
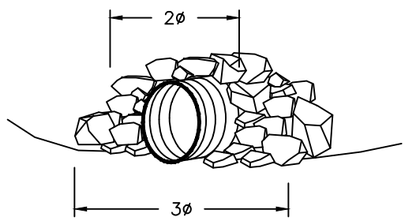
TYPE II CULVERT INSTALLATION WITH REINFORCEMENT



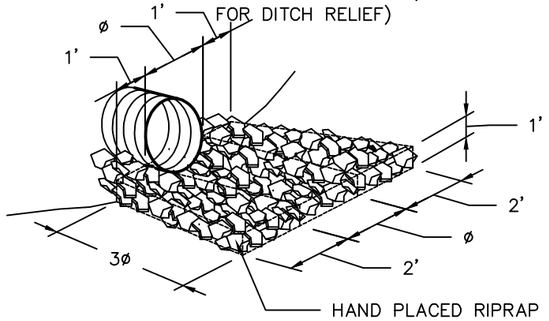
INLET AND OUTLET RIPRAP INSTALLATION

RIPRAP PLACEMENT INCIDENTAL TO PAY ITEM 60250

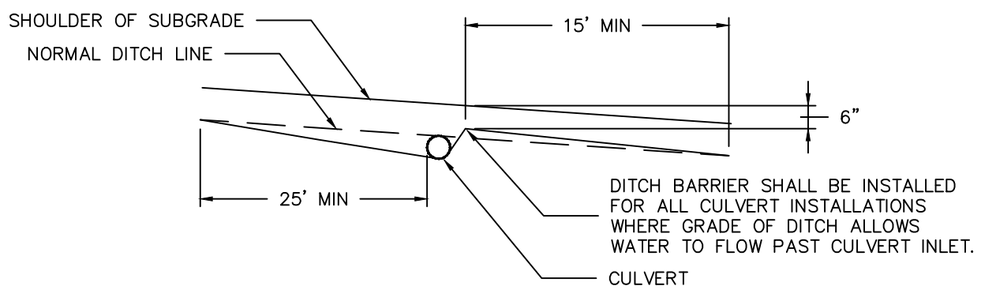


OUTLET APRON INSTALLATION

OUTLET RIPRAP PLACEMENT INCIDENTAL TO PAY ITEM 60250 AND 60253 IF SPECIFIED IN THE PLANS. (THIS DETAIL ONLY FOR DITCH RELIEF)



DITCH BLOCK DETAIL



DRAWINGS NOT TO SCALE

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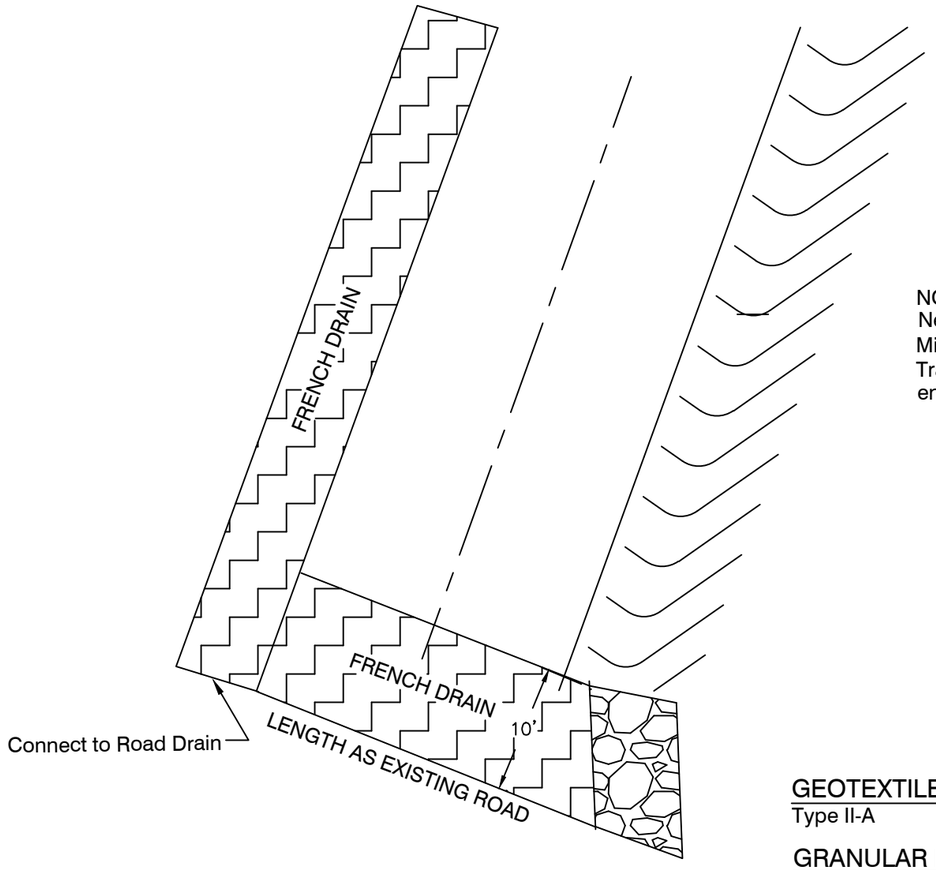
SHEET TITLE
CULVERT TYPE II INSTALLATION

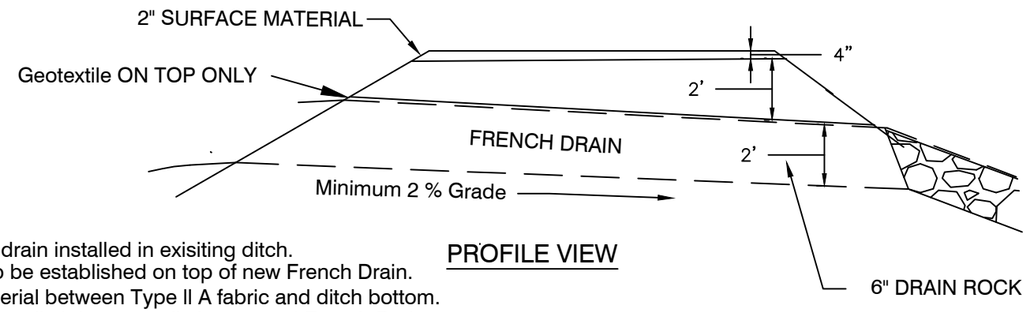
SHEET NO
14 0f 15

French Drain Detail

PLAN VIEW
(No Scale)



(Actual Location As Staked)



PROFILE VIEW

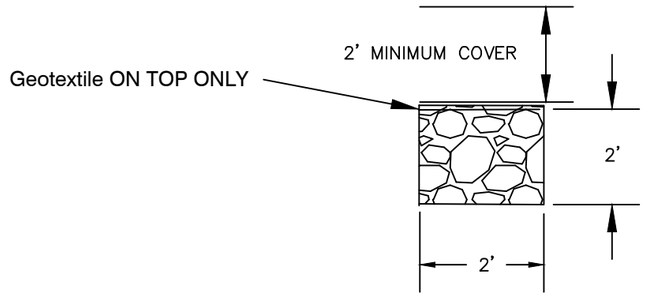
NOTE: French drain installed in exisiting ditch.
New ditchline to be established on top of new French Drain.
Minimum 2' material between Type ll A fabric and ditch bottom.
Transition existing ditch into new ditch on top of French Drain to ensure proper ditch function.

GEOTEXTILE REQUIRMENTS
Type II-A

GRANULAR BACKFILL MATERIAL
Minimum Size - 4"
Maximum Size - 10"

50 % of Granular Backfill Material Shall NOT be Less Than 6" in the Greatest Dimensions.

Installation Shall be in Accordance With Section 204.



END VIEW OF DITCH DRAIN

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SHEET TITLE
FRENCH DRAIN INSTALLATION

SHEET NO
15 0f 15